California Regional Water Quality Control Board
North Coast Region

ORDER NO. R1-2004-0094
ID No. 1B82051OMEN

WASTE DISCHARGE REQUIREMENTS

FOR

COAST WOOD PRESERVING, INC.
Plant and Taylor Road
Ukiah, California

Mendocino County

The California Regional Water Quality Control Board, North Coast Region, (hereinafter the Regional Water Board) finds that:

1. Coast Wood Preserving, Inc., (hereinafter referred to as the discharger) operates a wood treatment facility at Plant and Taylor Roads in Ukiah, California (Figure 1). The plant has been regulated by Waste Discharge Requirements Order No. 99-45, adopted by the Regional Water Board on July 21, 1999.

2. The discharger submitted a Report of Waste Discharge via a compilation of documents dated October 3, 2002, March 20, 2003, December 16, 2003, and June 14, 2004, describing changes to the existing operation. The operational changes include elimination of the wood treatment chemical solutions of chromic acid, arsenic acid and copper oxide and replacement of those treatment chemicals using copper ammonium carbonate solution (ACQ-C), aqueous copper solution (ACQ-C2) plus a borate solution as the new wood preservative mixture. The borate solution consists of boric acid as a buffer, and disodium octaborate tetrahydrate (DOT) as a wood preservative.

3. These Waste Discharge Requirements cover both the operations of the wood treatment facility and the on-going cleanup of soil and groundwater contamination.

4. The Coast Wood Treatment facility began operations in the early 1970's. No discharge controls were in place to prevent wood treatment chemicals from spilling onto the ground and contaminating soil, groundwater, and surface water. These past practices have resulted in soil contamination with arsenic, copper and chromium, and groundwater contamination primarily with chromium.

5. This is a federal and state Superfund site, and cleanup is occurring under the direction of the Regional Water Board, the Department of Toxic Substances Control, and the U.S. Environmental Protection Agency.

6. The discharger utilizes a premix solution of copper ammonium carbonate solution (ACQ-C) and aqueous copper solution (ACQ-C2) plus a borate solution in the wood treatment process. The ACQ solutions are diluted with water, and a borate solution is added which is then applied to lumber in pressure vessels. Wastewaters from the treatment process are collected in below ground sumps and transferred to above ground tanks for reuse in the treatment process.

7. The discharger generates waste liquids and solids containing wood treatment chemicals, which cannot be discharged from the facility. All liquid waste from the process and from storm water runoff is recycled as wood treatment process waters. Solid wastes are contained until suitable amounts are collected and hauled off site for disposal at a Class 1 disposal site.

8. Treated wood from the pressure vessels drip dries under roofed areas that are paved and sealed. This paved area is sloped to the sumps in front of the pressure vessels to capture wood treatment chemicals from the drying of treated wood. After the wood drip dries, it can be brought out into the yard where all storm water runoff is collected and reused as process dilution waters (Figure 2).

9. Numerous soil samples have been collected to define the extent of arsenic, copper and chromium contamination. Numerous groundwater monitoring wells have been installed to define the extent of groundwater contamination (Figure 2).

10. In 1989, the Department of Toxic Substances Control approved the Final Remedial Action Plan. The selected remedy as contained in the Remedial Action Plan includes: paving of exposed soils to prevent surface water infiltration and leaching of contaminants to groundwater; onsite treatment of impacted soils using best available technology following closure of the plant; hydraulic control of impacted groundwater using extraction wells; electrochemical treatment of extracted groundwater; reuse, recycling or discharge of treated groundwater via an injection well; and groundwater monitoring and sampling. The treatment of impacted soils was deferred for 10 years at which time the discharger anticipated closing the plant. In 1999, the discharger indicated that the plant would not be closed, and is treating soil in accordance with a Revised Remedial Action Plan. In 1999, the discharger also proposed to treat groundwater in-situ to augment the existing groundwater pump and treat system.

11. On March 19, 1999, a Draft Amendment to the Remedial Action Plan was submitted to modify the existing cleanup remedy in place at the site. The amendment addresses the in-situ treatment of contaminated soils underneath the plant, removal of contaminated soils in accessible areas around the operating facilities, and the in-situ treatment of contaminated groundwater. The previous

groundwater remedy of pumping and treating was effective in controlling the migration of the plume, but not effective in remediating groundwater to the water quality objective for total chromium of 50 ug/l in a reasonable period of time. Contaminated soils underneath the plant are being treated in-situ, and soils outside the footprint of the treatment areas have been excavated and hauled to an approved landfill for disposal.

12. The discharger is injecting calcium polysulfide into soil and groundwater to treat hexavalent chromium. The discharger also proposes to use other reducing agents such as ferrous or zero valent iron to treat chromium. The calcium polysulfide reductant and iron will react with the hexavalent chromium, reducing it to trivalent chromium. Trivalent chromium will adsorb onto soil particles. The discharger has determined the in-situ reduction of hexavalent chromium will not result in a significant increase of background trivalent chromium concentrations in soil. The discharger has indicated the residual reductant will locally raise the and sulfate content of groundwater and may temporarily impart a taste and odor of sulfur. In addition, the reductant may result in the mobilization of arsenic and manganese as part of the treatment process. Mobilization of arsenic and copper is anticipated to be limited to the treatment process area.

13. Arsenic has been mobilized in groundwater from the treatment of hexavalent chromium in a limited area near the retorts. The discharger is proposing to reduce arsenic through air sparging and/or the use of the reducing agents calcium peroxide (time release form of oxygen) or Bauxsol™ (an alkaline fine grained material high in ferric iron).

14. The in-situ treatment of hexavalent chromium has been effective in reducing the concentrations in groundwater to the extent that the groundwater extraction system has been shut down, and the groundwater treatment system has been dismantled and removed from the facility.

15. The Regional Water Board's Water Quality Control Plan for the North Coast Region includes water quality objectives and receiving water limitations.

16. Surface water in southern Ukiah flows to the Russian River. The beneficial uses of the Russian River and its tributaries include:

    a. municipal and domestic supply
    b. agricultural supply
    c. industrial service supply
    d. industrial process supply
    e. groundwater recharge
    f. navigation
    g. hydropower generation
    h. water contact recreation
    i. non-contact recreation
    j. commercial and sport fishing

k. aquaculture
l. warm freshwater habitat
m. cold freshwater habitat
n. estuarine habitat
o. wildlife habitat
p. migration of aquatic organisms
q. spawning, reproduction, and/or early development

17. Beneficial uses of areal groundwater as identified in the Water Quality Control Plan for the North Coast Region, include: municipal, domestic, industrial process and service supply, and agricultural water supply.

18. A Negative Declaration was prepared and approved by the Department of Toxic Substances Control on July 15, 1999, to satisfy the requirements of the California Environmental Quality Act (CEQA). The Negative Declaration was prepared to address the changes to the selected cleanup remedy for the Coast Wood Preserving site proposed in the Revised Amendment to the Remedial Action Plan dated March 19, 1999. The Regional Water Board considered the Negative Declaration in adopting Waste Discharge Requirements Order No. 99-45.

19. The action to adopt Waste Discharge Requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (Public Resources code Section 21000 et. seq.) in accordance with Title 14, California Code of Regulations, Section 15301.

20. The Regional Water Board has notified the discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements and has provided them with an opportunity to submit their written comments and recommendations.

21. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

THEREFORE, IT IS HEREBY ORDERED that Waste Discharge Requirements Order No. 99-45 is rescinded and the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of any waste not specifically regulated by this Order is prohibited.

2. Creation of a pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code (CWC) is prohibited. [Health and Safety Code, Section 5411]

3. The discharge of domestic waste, treated or untreated, to surface waters is prohibited.

4. The discharge of wood treatment chemicals or stain control fungicides to land, to surface waters or to groundwater is prohibited.

5. The discharge of woody debris is prohibited. For purposes of this prohibition, woody debris is defined as bark, twigs, branches, or wood chips which will not pass through a one-inch diameter round opening.

6. The storage of treated wood in areas outside of the storm water collection system or roofed areas is prohibited.

7. The discharge of treatment additives to land, surface waters or to groundwater in areas other than where chromium contaminated soil and groundwater is located is prohibited.

8. The discharge of waste to property not owned or controlled by the discharger is prohibited.

B. DISCHARGE SPECIFICATIONS

1. The discharger shall inspect annually the condition of the asphalt paved areas and concreted areas and repair them as necessary to prevent wood treatment chemicals, rainfall, and/or storm water runoff infiltration to soil and groundwater.

2. The discharger shall inspect annually and repair as necessary the sumps located in front of the pressurized treatment cylinders (retorts).

3. The injection of calcium polysulfide shall not impart taste, odor, or color to, or otherwise degrade the beneficial uses of areal groundwater, except for temporary taste and odor changes in areas of chromium contaminated groundwater.

4. The injection of calcium polysulfide shall not impart taste, odor, or color to or otherwise degrade the beneficial uses of areal groundwater beyond the boundaries of the property owned or controlled by the discharger.

5. All collected screenings, sludges or other solids removed from liquid wastes shall be stored according to all applicable regulations and disposed of at a legal point of disposal, and in accordance with the provisions of Title 23, Division 3, Chapter 15 of the California Code of Regulations or as waived pursuant to Section 13269 of the California Water Code.

C. PROVISIONS

1. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel.

2. Severability

   Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

3. Operation and Maintenance

   The discharger must maintain in good working order and operate as efficiently as possible any facility or control system installed by the discharger to achieve compliance with the waste discharge requirements.

4. Change in Discharge

   The discharger must promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge.

5. Change in Ownership

   In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger must notify the succeeding owner or operator of the following items by letter, in advance of the transfer of ownership or control, and a copy of the notice must be forwarded to the Regional Water Board:

   a. existence of this Order, and
   b. the status of the dischargers' annual fee account.

6. Vested Rights

   This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from his liability under federal, state, or local laws, nor create a vested right for the discharger to continue the waste discharge.

7. Monitoring

   The discharger must comply with the Contingency Planning and Notification Requirements Order No. 74-151 and the Monitoring and Reporting Program No. R1-2004-0094 and any modifications to these documents as specified by the Executive Officer. Such documents are attached to this Order and incorporated herein. Chemical, bacteriological,

and bioassay analyses must be conducted at a laboratory certified for such analysis by the State Department of Health Services.

8. Inspections

The discharger shall permit authorized staff of the Regional Water Board:

a. entry upon premises in which an effluent source is located or in which any required records are kept;
b. access to copy any records required to be kept under terms and conditions of this Order;
c. inspection of monitoring equipment or records; and
d. sampling of any discharge.

9. Noncompliance

In the event the discharger is unable to comply with any of the conditions of this Order due to:

a. breakdown of waste treatment equipment;
b. accidents caused by human error or negligence; or
c. other causes such as acts of nature;

The discharger must notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.

10. Revision of Requirements

This Regional Water Board requires the discharger to file a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

Certification

I, Catherine E. Kuhlman, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on November 29, 2004.

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Catherine E. Kuhlman
Executive Officer